

SMOOTH BLUE ASTER

Symphyotrichum laeve (L.) A.

Love & D. Love var. *laeve*

Plant symbol = SYLAL3

Contributed by: USDA NRCS National Plant Data Center



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Alternate Names

Aster falcidens var. *falcatus*, *Aster laevis*, *Aster laevis* forma *amplifolius*, *Aster laevis* forma *latifolius*, *Aster laevis* forma *purpurascens*, *Aster laevis* var. *amplifolius*, *Aster laevis* var. *falcatus*, *Aster laevis* var. *latifolius*, *Aster laevis* var. *thyrsoides*, *Aster steeleorum*, Smooth aster, *Symphyotrichum laeve*

Uses

Conservation: Smooth blue aster is used for mixed-grass and tallgrass prairie restoration as well as roadside revegetation.

Gardening: The showy flowers of smooth blue aster makes it a popular plant for use in wildflower, native plant, and butterfly gardens.

Wildlife: Smooth blue aster is palatable to white-tailed deer, which prefer to graze this species before other forbs. It has high nutritional value, decreasing with maturation. It also attracts butterflies, pollinators of the flowers, and can provide shelter for them.

Legal Status

Please consult the PLANTS Web site (<http://plants.usda.gov>) and your State Department of Natural Resources for this plant's current status (e.g. threatened or endangered species, state noxious status, and wetland indicator values).

Description

General: Aster Family (Asteraceae). Smooth blue aster is a perennial forb with a stout rhizome and underground stem (caudex). Six to seven aerial stems sprout from the caudex. Plants are generally 30 to 100 cm tall. Leaves are thick and stout, 1 to 2.4 cm wide and less than 5 times as long as wide, sometimes toothed along the margins and clasped to the stem by a lobed appendage (auricle). Leaves near the inflorescence are reduced to 2 mm bracts and have diamond-shaped tips. Each plant produces several inflorescences. Ray flowers are pale blue to purple, 7 to 15 mm long. Disc flowers are yellowish. Fruit are achenes. Flowering occurs from August to October. Lower leaves drop early in the autumn while upper leaves remain until frost top-kills the plant.

Distribution: Smooth blue aster is native to the United States. It occurs from Maine to British Columbia, south to Georgia and Arkansas, and west to New Mexico. For current distribution, please consult the Plant Profile page for this species on the PLANTS Web site.

Habitat: Smooth blue aster occurs in various habitats, ranging from moist woods to dry, open prairies. It is most notably associated with mixed prairie plant types, and is also a dominant understory species in quaking-aspen communities.

Adaptation

USDA hardiness zones for smooth blue aster are 4 to 8. Smooth blue aster occurs on various soil types. It was found to sustain more populations on wet, poorly drained glacial till in eastern Illinois and western Indiana. In Michigan it occurs on xeric sites more readily than on mesic and transitional sites. It is not tolerant of deep shade, but does well in high light to intermittent shade conditions.

Establishment

Smooth blue aster seeds are ready for collection in September when achenes separate easily from the receptacle. Dry seeds prior to cleaning and store in sealed containers at 3 to 5°C. Damp stratification at 1

to 2°C for 2.5 to 4 months may increase seed germination of higher elevation sources. Seed storage longevity is up to 7 years.

Seeds can be started in the greenhouse from December to March. Cover seeds to one times their depth with soil and lightly press down. Seeds germinate in 10 to 15 days at 22°C, reaching the true leaf stage in 7 to 15 days. Seedlings should be thinned and fertilizer can be applied biweekly once the true leaf stage has been reached. Foliage must be thoroughly rinsed off after fertilizer application. When foliage is 8 to 10 inches tall, prune plants back to 3 to 4 inches.

For the first 12 weeks, 20-10-20 liquid NPK fertilizer at 100 ppm is applied. Plants are then fertilized once with 10-20-20 liquid NPK at 200 ppm. After 4 weeks, seedlings can be stored in outdoor temperatures under insulating foam (if necessary) for up to 5 months before outplanting. Outplanting can take place from September to November or April to May.

Management

Deer grazing does not affect survival of established smooth blue aster plants, as long as only stem tips are removed. Most plants respond to grazing with vigorous growth the next growing season.

Herbicides used to control quack grass can suppress establishment or growth. These herbicides contain glyphosate, dichlobenil, picloram, tebuthiuron, and hexazinone, alone or in combination with each other.

Smooth blue aster resprouts from the rhizome after being top-killed by fire. In general, late spring fires have more adverse effects on percent plant coverage, and perhaps on leaf and flower regeneration, than early spring fires.

Cultivars, Improved, and Selected Materials (and area of origin)

The NRCS Plant Materials Program has not released any cultivars of smooth blue aster for conservation use. Regional seed sources of native smooth blue aster are recommended for use in your area.

References

Cochrane, T.S. 2004. *Vascular Plant Species Database* (<http://www.botany.wisc.edu/wisflora/scripts/detail.asp?SpCode=ASTLAEvLAE>, 26 February 2004). Wisconsin State Herbarium, Madison.

Native Plants Network. 2003. *Protocol information: Aster laevis* (<http://www.nativeplantnetwork.org/network>, 2 February 2004). University of Idaho, College of Natural Resources, Forest Research Nursery, Moscow.

Sullivan, J. 1992. *Aster laevis*. (<http://www.fs.fed.us/database/feis>, 2 February 2004). USDA Forest Service, Rocky Mountain Research Station, Fire Sciences Laboratory, Ft. Collins.

Vascular Plant Species Database. 2004. *Aster laevis* L. var. *laevis* (<http://www.botany.wisc.edu/wisflora/scripts/detail.asp?SpCode=ASTLAEvLAE>, 18 February 2004). Wisconsin State Herbarium, Madison.

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